Operational Risk Management

Taking the Risk out of a risky business

By Capt Chris Callaghan, Nellis AFB, Nev.

... We in the flying business know flying can be dangerous and that it is inherently unforgiving if approached with any disregard or carelessness.

Photo courtesy of U.S. Air Force Thunderbirds


Photo courtesy of U.S. Air Force Thunderbirds


Photo courtesy of U.S. Air Force Thunderbirds


Photo courtesy of U.S. Air Force Thunderbirds

ORM is part of everything we do ... ORM keeps us safe!

"Isn't your job dangerous?" I'm asked that question very frequently as an Air Force pilot and as a Thunderbird. My answer always points to the fact that we take a seemingly dangerous job and break it down into safe and manageable phases. We, in the flying business, know that flying can be dangerous and that it is inherently unforgiving if approached with any disregard or carelessness. Today, more than ever, we are deployed all over the world with an extremely busy operations and training tempo, which has introduced very dynamic and challenging environments. Unfortunately, these environments have ushered in a period of increased mishap rates in Air Combat Command, and the irreplaceable loss of people and planes.

At the end of the last fiscal year, Gen Hornburg, ACC Commander, challenged us to take charge of the basics and not overlook the risks involved with the less complex portions of our missions. Combat losses are not the source of our accidents and incidents; lately they are rooted in midairs, controlled flight into terrain, and landing mishaps. It's easy to sit back after a mishap has occurred and see the error chain. To be successful, however, we have to get good at the more difficult task of being proactive about mission hazards. We must identify them early and implement a plan to mitigate risks before they affect our missions and our people.

We have institutionalized ORM into Thunderbird flying because our mission demands it. We operate in close proximity to each other, low to the ground at high speeds, and from different airfields and show sites each week. Our need for ORM is an obvious one, but all Air Force missions demand ORM. We use a very common sense approach to ORM since ultimately its goal is a simple and logical plan to identify and reduce risk in our daily operations.

Thunderbird ORM is very specific to our environment and requirements, as it should be for all of us. We fly according to a regulation that drives very conservative operations. We are spring-loaded to the conservative approach because a safe demonstration is our number one priority. Our training philosophy is no different than those of other Air Force squadrons; it is based on the building block approach. Our goal is not to over-saturate pilots, but allow them to develop proficiency in basic skills and then introduce more demanding tasks. We accomplish this through a specific syllabus for each trainee with a graduated altitude stepdown plan that starts with slightly wider formations. Gradually, and at a comfortable pace, we work lower to the ground in tighter formation.

Even when we've arrived at our lowest altitudes and tightest formations, we continue to practice ORM on each sortie. We have specific steps to abort maneuvers and we practice aborts daily. We have a safety observer on the ground to back us up, and identify the need to abort if minimum parameters for each maneuver are not met. We abide by very strict deconfliction contracts and execute abort procedures if there is any doubt. We simulate in-flight emergencies and abnormal situations during demonstration sequences, and take them to logical conclusions.

As each location presents a new set of challenges, we find ourselves using a mixture of conservative steps. This process begins with meticulous planning weeks in advance of any show. We use satellite imagery of each demonstration site to become familiar with ground references and potential hazards. From there, we develop a plan to deal with any identified hazards. In extreme cases, we decide that a given location is simply not suited for high speed, low altitude formation aerobatics. Our analysis continues upon arrival with an airborne survey. We verify the accuracy of our imagery, look for additional hazards that the imagery didn't reveal, and cross-check the location of show line markers.

Upon completing the analysis, we have the information to implement a plan to minimize the risks involved with the demonstration. Elements that challenge us in the demonstration are similar to ones we all deal with: terrain, weather, turbulence, fatigue, etc. We brief a plan to deal with these each time we fly and this consistent routine is critical to our success. We specifically implement the plan a number of ways. These include the flexibility to fly "wider" formations in high winds or turbulence, raising our minimum altitudes for inconsistent or rolling terrain, modifying our ground track for obstructions (such as towers), using increased landing spacing for short and/or wet runways, and increased taxi spacing in areas of higher FOD potential. Each pilot has the obligation to recommend a conservative call if he sees the need. Just as these ORM steps are unique to us, yours will be unique to your operation. These steps allowed us to have a very safe and successful year in 2002 and, as we embark upon our 50th Anniversary in 2003, we will continue to fly with safety at the top of our priority list.

One of the many challenges we are all faced with when we fly is to mitigate the risk associated with each phase of flight. Some of these hazards are predictable but others happen real-time. Dealing with both types requires the discipline, leadership, and airmanship to adjust our sorties as required, including terminating for the day.

We know that our people are our greatest Air Force asset. We also know that we can't accomplish the mission (killing MiGs, putting bombs on target, delivering supplies, refueling aircraft, etc.) if we don't take care of the basics. ORM is a tool to help us in all phases of flight with the goal of safe and successful operations. Let's use it proactively to get the job done right and bring everyone home safely. Happy hunting!

Editor's Note: *Capt Chris Callaghan—aka—Thunderbird #3, is the right wing and flight safety officer.*

Thunderbird ORM is very specific to our environment and requirements, as it should be for all of us. We are spring-loaded to the conservative approach because a safe demonstration is our number one priority.


Photo courtesy of U.S. Air Force Thunderbirds